

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>30 SEP 2001</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2001 to 00-00-2001</b>	
4. TITLE AND SUBTITLE <b>Oceanographic, Acoustic, And Marine Mammal Research</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Marine Acoustics, Inc., Ballston Metro Center, Suite 708,,901 North Stuart Street,,Arlington,,VA, 22203</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>The long-term goal of this effort is to facilitate ONR 321 Ocean Acoustics Program at-sea experiments through the preparation of scientifically rigorous environmental compliance documentation.</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>3</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

# **Oceanographic, Acoustic, And Marine Mammal Research**

William R. Metzger  
Marine Acoustics, Inc.  
Ballston Metro Center, Suite 708  
901 North Stuart Street  
Arlington, VA 22203  
phone: (703) 465-8404 fax: (703) 465-8420 email: [bill.metzger@marineacoustics.com](mailto:bill.metzger@marineacoustics.com)

Contract Number: N00014-00-C-0040

## **LONG-TERM GOALS**

The long-term goal of this effort is to facilitate ONR 321 Ocean Acoustics Program at-sea experiments through the preparation of scientifically rigorous environmental compliance documentation.

## **OBJECTIVES**

The objective of this effort is to conduct analyses of the potential impacts of ocean acoustics tests and to prepare environmental documents compliant with applicable Federal and State statutes and DoD/DoN regulations and policies.

## **APPROACH**

For each at-sea experiment, a team of marine biologists, acousticians, and analysts study proposed scenarios, acoustic source properties, forecast acoustic conditions, and marine species populations and vulnerabilities to determine potential impacts and develop mitigation measures.

## **WORK COMPLETED**

For each experiment, the zones of influence for potential acoustic impacts on various marine species were calculated and the estimated number of animals potentially impacted was calculated. By working closely with planners, environmental analysts were able to influence the design of these experiments so that their objectives could be met while potential effects on the marine environment were minimized.

## **RESULTS**

Environmental documentation was completed and OPNAV approval was obtained for the Delaware Bay High Frequency Acoustics Experiment, GeoClutter and Boundary Characterization 2001 Experiment, Shallow Water Acoustic Technology (SWAT) Experiment 2001, Naval Undersea Warfare Center 2001 Bottom Survey, and Asian Seas International Acoustic Experiment (ASIAEX) 2001. With the exception of the Bottom Survey (cancelled due to non-availability of assets), all of these experiments were conducted using mitigation measures developed under this task.

## **IMPACT/APPLICATIONS**

The analyses conducted under this effort were required by U.S. law and by DoD, DoN, OPNAV, and ONR regulations.

## **TRANSITIONS**

The results of analyses conducted under this task allowed the Delaware Bay High Frequency Acoustics Experiment, GeoClutter and Boundary Characterization 2001 Experiment, Shallow Water Acoustic Technology (SWAT) Experiment 2001, and Asian Seas International Acoustic Experiment (ASIAEX) 2001 to take place as scheduled.

## **RELATED PROJECTS**

Environmental compliance documents were prepared for the GeoClutter and Boundary Characterization program, the Shallow Water Acoustic Technology (SWAT) program, the Asian Seas International Acoustic Experiment (ASIAEX) program, and the Delaware Bay High Frequency Acoustics program

Additionally, the Environmental Compliance Reference Database developed and maintained under the Research For Marine Mammal Mitigation project was used as a source for these impact analyses and new material and analyses compiled during the preparation of environmental documentation were added to the Environmental Compliance Reference Database.

## **REFERENCES**

N/A

## **PUBLICATIONS**

Environmental Assessment for the Delaware Bay High Frequency Acoustics Experiment

Overseas Environmental Assessment for the GeoClutter and Boundary Characterization 2001 Experiment

Overseas Environmental Assessment for the Naval Undersea Warfare Center 2001 Bottom Survey

Overseas Environmental Assessment for the Shallow Water Acoustic Technology (SWAT) Experiment 2001

Analysis of Potential Environmental Effects Resulting from US Participation in ASIAEX 2001

## **PATENTS**

N/A